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Feniseca tarquinius
Chrysalis (enlarged)

SEPTEMBER, 1899.

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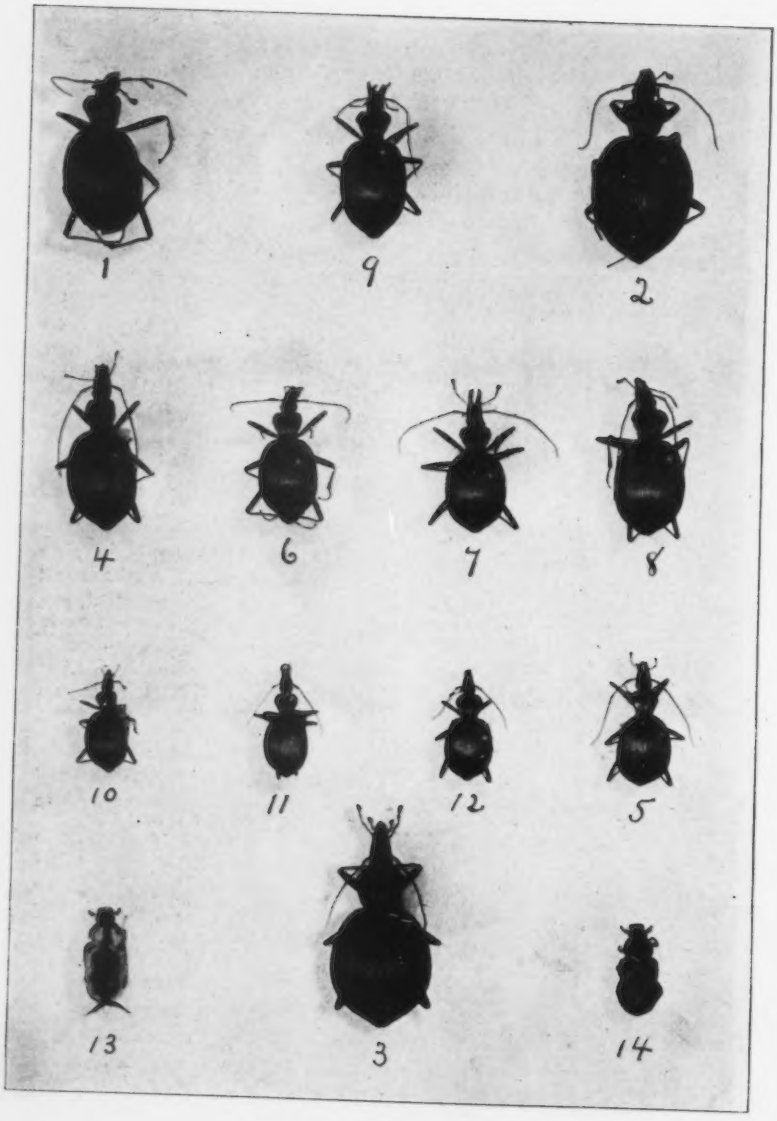

CYCHRUS, etc., (Liebeck)

ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

VOL. X. SEPTEMBER, 1899. No. 7.

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CYCHRUS GUYOTI vs. C. ANDREWSII VAR.

BY CHARLES LIEBECK, Philadelphia, Pa.

(See Plate VI.)

In the recent paper on *Cychrus* by G. E. Ehrmann, attention was called to a paragraph pertaining to certain specimens of *C. Guyoti* (No. 9 of plate), in the possession of Prof. Jerome Schmitt, of St. Vincent's College, Pa. Some confusion regarding the identity of this species exists in many collections, and the following notes are submitted with a view to preventing future errors.

C. Guyoti was described by Dr. Leconte, Proc. Phila. Acad. Nat. Sciences in 1866, p. 363, from a unique female collected in the Black Mountains of North Carolina. Later Dr. Horn, in his paper on *Cychrus* of N. A. Trans. Am. Ent. Soc., 1878, Vol. 7, p. 173-174, submitted the characters of male tarsi, separating these species as follows:

Anterior tarsus of male with a slight papillose space at tip of first joint. *Guyoti.*

Anterior tarsus of male densely, spongy pubescent beneath, first joint clothed over nearly the entire surface. *Andrewsii.*

When males are not present the position of the strial punctures of the elytron will readily separate the species.

Punctures of striæ regular and well centered.
Andrewsii.

Punctures of striæ confused and encroaching on the intervals. *Guyoti.*

This character pertains to the basal three-fourths of the elytra, as the striæ and punctuation become confused at the apex in both species.

But three authentic specimens of *C. Guyoti* have been examined, and possibly forty of *C. Andrewsii*, all forms, and no deviation from the above rule occurs.

There is a tendency in many specimens of *C. Andrewsii* to a broadly angulated form of thorax as is shown by the accompanying plate, the series showing gradual development from No. 4 to 9 in regular order.

A series of *C. Ridingsii*, Nos. 10, 11 and 12, is also utilized to show the same character.

Without types or authentic specimens at hand, and only females present, the student can very easily go astray, as can be seen by a glance at No. 9, a supposed *Guyoti*, or No. 5, a small *Andrewsii*, which could very readily be confused with *Ridingsii*. The figures of plate show the comparative size of the various species, and it will be seen that *Guyoti* is much larger than *Andrewsii*, being quite as large as the larger form of *C. viduus.*

Specimens of the several species from Pennsylvania have the thorax longer and narrower than those of North Carolina and Tennessee.

I am indebted to Dr. Henry Skinner for the excellent photograph of the specimens and to Mr. Roland Hayward for careful comparisons with the Leconte specimens in the Cambridge Museum.

EXPLANATION OF PLATE.

1. C. Guyoti Lec. male (Horn Coll.).
2. C Guyoti Lec female (Wenzel Coll.).
3. C. viduus Dej.
4. C. Andrewsii Harr. Pa.
5. C. Andrewsii Harr. Va.
6. C. Andrewsii Harr. N C.
7. C. Andrewsii Harr. N. C.
8. C. Andrewsii Harr Sawyer's Springs, Tenn.
9. C. Andrewsii Harr. N. C.
10. C. Ridingsii Bland, type female, Va.
11. C. Ridingsii Bland, Pa.

12. C. Ridingsii Bland, Tenn.
13. Cremastochilus leucostictus Burm. male.
14. Cremastochilus leucostictus Burm. female.

—o—

THE LARGEST OAK-GALL IN THE WORLD AND ITS PARASITES.

By William H. Ashmead.

Some two or more years ago, February 20, 1897, the National Museum received from Dr. A. Duges, of Guanajaro, Mexico, the largest oak-gall it has ever been my pleasure to see, and which is undoubtedly the largest Cynipid gall yet discovered. Subsequently additional specimens of the same species, but much smaller and exceedingly variable in shape and size, were also received from Dr. Duges.

The first and largest specimen received, and which is unquestionably the largest oak-gall in the world, is of an irregular oblong, globular shape, and measures fully 4½ inches long by 3 inches in diameter. Externally it is opague, more or less roughened, and of a greyish color or somewhat similar in color to the bark of our common white oak; white internally it is brown and of a dense, hard, pithy substance. It is polythalamous; the larvæ cells being numerous and deeply imbedded, in the interior of the gall, as in those of similar structure.

The other specimens, afterwards received from Dr. Duges, are, as stated before, much smaller, more irregular in shape, and dwindle down in size to specimens not exceeding an inch in diameter. All of them, as we are reliably informed by Dr. Duges, were obtained from the roots of an unknown Mexican oak tree.

At the time of the receipt of the largest of these galls, I reported the gall was the product of an undescribed Cynipid, which would probably prove to belong to the genus Andricus.

The rearing of three of the gall-flies by Dr. Duges confirms my opinion in reference to the generic position of the gall-makers of this gigantic gall, but the gall itself is evidently similar to one described as *Cynips Championi* by Mr. Peter Cameron, in Biologia Centrali-Americana, Hymoptera, vol. 1, p. 70, the maker of which was unknown.

Dr. Duges also bred from this gall two distinct parasites: an inquiline, *Synergus* sp., and a Torymid, *Torymus* sp.; also a

beautiful undescribed rhynchophorus beetle. The last the late Mr. Martin Linell had intended to describe under the name of ———

I believe with Dr. Calvert, that a name given to a gall alone, without a knowledge of the gall-maker, will hold in most cases, but such descriptions should be discouraged, since the identification of galls, without their makers, is always attended with uncertainty ever afterwards.

It is so in this case, but the name given by Mr. Cameron must be retained, and I give below, for the first time, the description of its maker, and its parasites.

Andricus championi *Cameron*

Cynips championi *Cam.* Biol. Centr.—Am. Hym I, p. 70. (Gall).

Gall-fly.—♀ Length 4.5 mm. Black, the abdomen and anterior and middle femora rufous. Head and thorax rugoso-punctate, clothed with a sparse, glittering pubescence; abdomen smooth, polished, impunctate, the sides of segments 1-7 with sparse glittering hairs, antennæ 14 joïnted, long, filiform, black, the third joint the longest, more than six times as long as thick, the following joints to the 13th, gradually shortening, the 13th joint being scarcely one-third the length of the third joint, the last joint almost as long as 12-13 united. Clypeus rounded at apex. Mandible strong, tridentate, piceous black, the inner tooth minute, the middle and outer tooth large, subequal. Mesothorax with the parapsidal furrows distinct and posteriorly becoming obliterated just before attaining the base of the scutellum; a median furrow only slightly or vaguely defi ned on the middle of the disk; anteriorly close to the margin are two short, glabrous lines; while the scapulæ have a long glabrous line; scutellum rounded, rugose, the foveæ at base with raised lines; metathorax short, with too median carinæ. Wings hyaline, the veins piceous-black, the vein at base of the open marginal being short and strongly angulated. Abdomen ovate, as long as the head and thorax united, polished impunctate except some sparse punctures on the sides of the seventh segment; sheaths of ovipositor black, not at all prominent.

Hab—Guanajuato, Mexico.

Type, No. 4304 U. S. N. M.

Described from 3 ♀ specimens, received from Dr. A. Duges.

Synergus Dugesi, n. sp.

♀—Length 3mm. Black, head, except the vertex, eyes, and occiput, the antennæ, the pronotum, except anteriorly, the trochanters, the knees, the tips of anterior and middle tibiæ and beneath, and their tarsi, brownish-yellow. Head rugoso-punctate, the face and cheeks with strong converging striæ. Mandibles ferruginous, black at tips. Antennæ 13-jointed the third joint very nearly as long as 4-5 united. Mesonotum rather coarsely, transversely rugalose, the parapsidal furrows very nearly obliterated by the coarseness of the sculpture. Mesopleura longitudinally striated. Metanotum short oblique, with two, rather widely separated, median carinæ and a distinct lateral carina, the angles prominent, pubescent, with prominent spiracles. Wings hyaline, the tegulæ piceous, the veins, except the subcostal and the median veins towards base which are pale yellowish piceous black. Abdomen ovate, about one-third longer than the head and thorax united, highly polished, black, the second segment, except the very short petiole, occupying the whole surface, the terminal segments being retracted.

♂—Length 2-6 mm. Agrees well with the ♀, except the sides of the pronotum, the mesopleura, but not the mesopectus and the legs, except a dusty shade on the hind tibiæ and tarsi, are wholly brownish yellow; the parapsidal furrows are distinct, the tegulæ brownish-yellow, while the antennæ are 15-jointed, the third joint being somewhat thickened, slightly curved and fully as long as joints 4-5 united, the following joints subequal.

Type, No. 4305 U. S. N. M.

Described from 1 ♂ and 2 ♀ specimens, bred by Dr. A. Duges from Andricus (Cynips) Championi *Cam.*

Torymus Mexicanus, n. sp.

♀.—Length 4 mm.; ovipositor 6.5 mm. Head and thorax metallic green, the hind margin of the mesopleura violaceous followed by a bright cupreous band; abdomen bronzed-black; flagellum black; scape, tegulæ and tarsi brownish-yellow; coxæ metallic green; anterior femora towards base and the hind femora except tips, metallic brown, the rest of the legs rufous wings hyaline, the veins, except the subcostal at base,

dark brown. Head shagreened and punctate, the face clothed with a white pubescence; mandibles ferruginous, the teeth black. Thorax sparsely pubescent, transversely shagreened and punctured, the punctures more distinct and coarser along the hind margin of the pronotum, on the parapsides along the furrow of same, and on the scutellum. Mesopleura except the hind margin sculptured, the hind margin smooth, impunctate. Hind coxæ large, reticulately sculptured. Abdomen finely or microscopically reticulated, the dorsal flap bluish.

♂.—Length 3.2 mm. Agrees well with the ♀ in color and in the structure of the head and thorax, but the tegulæ and the femora are bluish-green, the tibiæ dark brown, the tarsi, except the terminal joint, whitish, while the abdomen is bluish-green scarcely as long as the thorax, with the dorsal flap bright green.

Type, No. 4306 U. S. N. M.

Described from 1 ♀ bred from the small gall.

———o———

RECOLLECTIONS OF OLD COLLECTING GROUNDS.

By H. F. Wickham, Iowa City, Iowa.

IX. The Alpine Districts about Leadville.

Leaving Buena Vista, the railroad follows the Arkansas Valley very closely in the long climb to Leadville. As the mountain summits draw nearer and nearer the waters of the turbulent stream become ever less muddy and by the time the great mining camp is reached the dwindled Arkansas is transformed into a clear brook, flowing over a pebbly bed or gliding more slowly on a torturous course through broad marshy meadows. The altitude has now exceeded ten thousand feet and the fauna and flora are essentially modified in consequence.

We arrived at the station late in the afternoon of July 7th, during a heavy rain. Every afternoon of our eight day sojourn was marred by a like precipitation of moisture and this detracted materially from the pleasure of the trip as well as interfering with collecting. These showers are very cold and quickly result in benumbed hands which are slow to grasp the ground-inhabiting insects, and the saturated dripping foliage precludes successful use of the sweep-net or umbrella. The little butterflies (apparently some species of *Lycæna*) fold

their wings and hang quite still upon the shrubs while a cold storm cloud is passing over, only to awake to active flight almost the instant that the sun comes out again.

The dirty, smoky city covers a great deal of ground and it is something of a walk from the "up town" hotels into the wooded hills which rise on every hand. The large timber, if there ever was much of it, is now mostly gone and the remaining trees are chiefly so dwarfed or undersized as to be of no use for commercial purposes. To this they owe their existence and as they still support some insects let us hope that they may long remain undisturbed. Many of the large ravines and gulches have been ruined entomologically by extensive mining operations but a few spots were found which yielded tolerably well. The stony porous soil of most of the hillsides holds but very little water and supports a fauna which is in strong contrast to that of the marshy valley region.

We saw no living *Cicindelidæ* during our stay, but some dead *C. cinctipennis* served to show that the species extends up the valley from Buena Vista, where it was seen rather abundantly. On the higher slopes of Moose Mountain, which lies near enough to Leadville to make the summit, though far above timber line, tolerably easy of access on foot, we took *Carabus tædatus*, of the form which I have always considered as representing *oregonensis* and have distributed as such. It was scarcely common, but we managed to get several under stones and logs in the valley of a little stream which heads on the mountain. The banks of this stream were lined with stones under which we found a few *Nebria obliqua* and *N trifaria*, *Patrobus aterrimus* and some Staphylinidæ, while *Bembidium incertum*, *B. grapii* and *Trechus chalybeus* were secured with them but in more abundance. All of these bank loving Carabidæ were found in the wettest, coldest spots, often in the spray from a small cataract and their capture was attended with a good deal of bodily discomfort, owing to the rains and the very low temperature of the water in these mountain streams which are mainly fed from snow fields lying higher up.

Following the ravine we finally emerged from the timber and found ourselves on the bald, rocky head of the mountain, where no trees grow, for after leaving the fringe of gnarled,

wind-twisted stunted evergreens that mark the timber line, the rest of the vegetation consists only of low herbs which become of less and less height as we ascend until at last we find the flowers blooming almost on the level of the ground from which they emerge—a scanty circlet of leaves, crowned by a stalkless blossom—and the spaces between the boulders are clothed with a flower-studded carpet of vegetation which has the general effect of moss, though really very different. Between timber line and the summit we secured *Pterostichus surgens*, *Amara hyperborea*, *Cymindis cribricollis*, *Cytilus trivittatus*, *Aphodius aleutus*, *A. phœopterus*, *A. vittatus* and fragments of the before mentioned *Carabus* and of *Entomoscelis adonidis*.

The lower hills near town were worked for Carabidæ by careful search under stones. As a result we got *Notiophilus sibiricus*, *Pterostichus protractus*, *Pt. luczotii*, innumerable *Amaræ*, *Calathus ingratus*, *Cymindis unicolor*, *C. cribricollis*, *Harpalus innocuus* and *H. montanus*. Incidentally we secured some beetles of other families in the same situations,—*Cytilus trivittatus*, *Cryptohypnus* [*abbreviatus*,] *C. nocturnus*, *C. tumescens*, *Graphops varians*, *Adimonia externa* and a species of *Macrops*. Foliage of the dwarf evergreens on these hills was beaten over an umbrella with results as follows:—*Scymnus utilis*, one specimen, *Athous simplex*, rather scarce, *Podabrus lateralis* more abundant, *Dasytes hudsonius*, a few, *Callidium hirtellum*, a couple, and *Pachybrachys subvittatus*, several. On poplars we found a *Dicerca* (*tenebrosa?*) and numerous *Zeugophora abnormis*, the latter eating irregular holes in the leaves. Some dead tops of coniferæ yielded several *Magdalis*, *Plagithmysus muricatulus* in plenty, and a specimen of *Salpingus virescens*. Flower working and miscellaneous sweeping showed up (besides some commoner things) *Coscinoptera vittigera*, *Trichodes ornatus*, *Epicanta pruinosa* and *Entomoscelis adonidis*. *Rhynchites bicolor* was not uncommon on wild roses. A few pieces of wood and the rubbish accumulated by a former rush of water through a deep ravine, furnished shelter for *Peritaxia rugicollis* and *Stephanocleonus cristatus*. The insects of the marshes are mostly Staphylinidæ, not yet worked out; however I can name a few beetles from these spots, as follows:—*Elaphrus clairvillei*, rare, *Tachinus angustatus*, *Mycetoporus* sp., and an *Erycus* which seems to be *morio*.

Here, as at Buena Vista, we found it well worth while to search piles of logs and of sawed lumber in the railroad yards and about mills. We got in this way a very good lot of species as the accompanying list will show: *Melanophila longipes, M. drummondi, Chrysobothris caurina, Buprestis langii, B. adjecta, Clerus nigriventris, C. sphegeus, Thanasimus undulatus, Asemum mœstum, Criocephalus agrestis, C. productus, Phymatodes dimidiatus, Pachyta liturata* (light and dark forms), *Acmœops proteus. A. pratensis, Leptura 6-maculata, L. sanguinea, Monohammus scutellatus* and *Pagonocherus mixtus.* Altogether we considered our visit to this vicinity as being a successful one, although the neighborhood is probably by no means as rich as in former days before the development of its mineral resources so ruined the beauty which must have marked it previous to the advent of the railroad and the smelter.

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CALOPTERYX ANGUSTIPENNIS SELYS IN WESTERN PENNSYLVANIA.*

By E. B. Williamson, Pittsburgh, Pa.

On June 18th of this year Mr. D. A. Atkinson, J. L. Graf, H. D. Merrick and myself visited Ohio Pyle Falls, where in the course of a few hours we succeeded in taking about 40 specimens of the species named above. Males predominated. Ohio Pyle is situated on the Youghiogheny River. This river rises in Garrett and Preston counties, West Virginia; flows north into Pennsylvania, thence flowing north by northeast and emptying into the Monongahela at McKeesport, about 15 miles from the Ohio River. The Youghiogheny in its entire course is about 100 miles long. Ohio Pyle is in Fayette county, in the Laurel Ridge of the Allegheny mountains, at altitude of about 2,000 feet. It is about 12 miles north of the State line, in latitude 39° and 50' north and longitude 79° and 30' west. At Ohio Pyle the Youghiogheny has an average width of about 50 yards. Hills, several hundred feet in height, covered with deciduous trees, rise abruptly from the banks of

*This brief paper is remarkable in that it gives an account of what is probably the most remarkable case of re-discovery of a rare species ever made among the North American Odonata. No other male of *angustipennis* has been known to exist than that in the British Museum, sent by Abbot from Georgia a century ago. Three females have been previously known. See Hagen, Psyche, v, p. 244. —P. P. Calvert.

the river. The bed of the stream is filled with large sandstone and conglomerate boulders, past which the current rushes with great velocity.

The *Calopteryx* in its flight and habits much resembles *Hetaerina americana*, flitting over the rapids, resting on the boulders and on the few bushes and grasses margining the stream. They are swifter in flight and more difficult to take than *Calopteryx maculata*. Only adults were seen. One pair was taken in copulation.

Compared with Hagen's description, published in *Psyche* in 1889, the following may be noted :

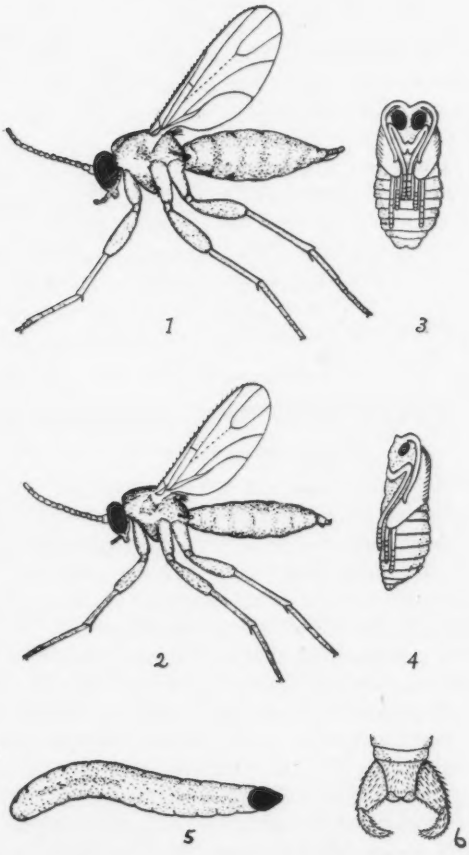
Hind wing, ♂, 36 ; ♀, 38. Width at nodus of hind wing, ♂ and ♀, 8. Ante-cubitals, front wings, ♂ and ♀, about 28 ; ante-cubitals of hind wings, ♂, about 22 ; ♀, about 25. Abdomen, ♂, 46 ; ♀, 43.

♂.—Second joint of antennæ, labrum and a small inferior median spot on rhinarium greenish white ; labrum with a round black spot just below the white spot on rhinarium ; labium black, outer lobe narrowly margined with greenish white ; upper part of head, especially about the ocelli, with brassy reflections ; eyes brown, thorax and abdomen bright green ; sutures of thorax black ; pectus pruinose with a transverse green band before the base of 1. Wings with the reticulation largely green, most noticeable when seen from the front ; subcostal apparently black ; median vein and principal sector closely joined for the distance of four or five antecubitals ; principal sector apparently arising from the subnodal. Abdomen darker anteriorly with bluish reflections, tending to brassy posteriorly, greenish black underneath ; sternum of 1 chalky white ; base of sterna of 3 to 8, with two bluish spots ; appendages dark greenish brown, as compared with *C. virgo* and *C. maculata* relatively longer, possibly with more teeth on the exterior dorsal edge of the superiors.

Since the above was written I have had the privilege of examining a male and female of this species collected by Mr. R. C. Osburn and Mr. J. B. Parker, on June 10th, in central Ohio, eight days before the species was taken at Ohio Pyle. The specimens were taken along Pine Creek, a tributary of Clear Fork, which in turn empties into the Mohican. They offer no differences from the western Pennsylvania specimens.

SCIARA INCONSTANS—REARED FROM CARNATIONS.

By James S. Hine.



In his second report Fitch described as *Molobrus inconstans* an insect which he found common in December on the windows of his room. He states that in all probability they emerged from earth in some flower-pots.

In January of the present year the complaint came in that

carnations in the greenhouse were dying from some unknown cause. I investigated the matter and found no cause except numbers of minute white larvæ which were boring inside of all the stems that showed serious injury.

From these larvæ I reared several adults which were easily traced to the genus *Sciara*, but not being sure of the species I sents pecimens to the Department of Agriculture at Washington where they were labeled *inconstans*. From what I knew of the habits of the larvæ of the Mycetophylidæ I supposed at first that the plants were killed in some other way and then were attacked by these insects, but by farther observation I was convinced that they fed upon the growing plants.

In the accompanying drawing, figure 1 represents the adult female, figure 2 the adult male, figure 3 the ventral view of pupa, figure 4 side view of pupa, figure 5 the larva and figure 6 the last abdominal segment of the male.

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LIFE HISTORY OF NOTODONTA GEORGICA—H. S.

By Harrison G. Dyar.

This larva is here described for the first time. Dr. Packard's description (Mon. Notodont., p. 154) of *georgica* larva was taken from some specimens in the National Museum which appear to have never been bred. What reason led to their identification as *georgica* is unknown to me, but they are in reality evidently larvæ of *Heterocampa obliqua*.

It will be remembered that Abbott and Smith figure *N. georgica* and *N. angulosa* as sexes of one species. My breeding explains this matter, since the larvæ of these species have the same food plant and habits and moreover resemble each other almost to identity. The main difference is the colored tubercle on the eighth abdominal segment of *georgica*. Apparently Abbot, overlooking this slight difference, figured the two species as sexes of one, since he probably bred them from what he considered the same larva.

Egg. I have not found these in nature. Eggs from the abdomen of the female moth are apparently hemispherical, white, coarsely granular rather than reticular and about 1 mm. in diameter.

Stage I. Head rounded, brown, a black shade over the vertex and behind; width .55 mm. Body slender, smooth and shining, sordid smoky greenish; a diffuse dark dorsal shade; a reddish band subventrally, joined to large blackish spots on joints 5, 6, 11, 12 subventrally with smaller spots on joints 3 and 4. Feet all black. Joint 12 a little enlarged; setæ short, pale; tubercles minute, black, normal, primary; cervical shield small, quadrate, dusky.

Stage II. Head rounded, bilobed, sordid green, a black line at the junction with neck and a blackish shade from the jaw to base of antenna; width 1 mm. Body opaque greenish white, dorsal vessel dark; a narrow white lateral line and yellow substigmatal one; subventral region olive brown the whole length. Thoracic feet, tubercles and leg plates black; anal plate dusky; cervical shield not distinct; joint 12 a little enlarged, its tubercles i large, contiguous, not elevated.

Stage III. Head green, a faint yellow line on each side behind the ocelli; width 1.4 to 1.8 mm. Body much as before, the tubercles and leg plates green; tubercles i of joint 12 large, at first concolorous, later yellowish.

Stage IV. Head higher than joint 2, flattened before, clypeus small, median suture a deep groove; deep green, finely mottled with white, a yellow line from antenna over lower ocellus to back of head; width 2.3 to 3 mm. Body slender, joint 13 tapering, its feet weak. Skin smooth except tubercles i of joint 12 which are high contiguous yellow tubercles with a seta at the apex of each. Green, the back heavily shaded with white, a broad dorsal band, streaked on the annulets (which are 6), divided by a greenish central line; a narrow subdorsal and lateral line, faintly white. The white shading extends between all these to a yellow stigmatal line with a black dash below it on joints 3 to 6, 11 and 12. A few white dots subventrally; feet green, the thoracic ones with three black dots. In another example the stigmatal line was narrowly bordered above with black, below with red.

Stage V. Head high, wide, rounded, green, thickly white mottled; jaws and a line to back of head opposite spiracle of joint 2 yellow, continuing the yellow stigmatal line of the body and like it narrowly red-edged below. Width 3.9 to 5 mm. Body slender, setæ minute, joint 12 a little enlarged dorsally,

with high, contiguous, yellow, orange-tipped tubercles i. Marks as before, except that instead of the later lateral white line is a row of dots. Dorsum all white shaded, subventral region white dotted; stigmatal line narrowly black edged above with black dashes present on the legless segments, but not conspicuously.

The larvæ lives on a perch as *N. angulosa* and *N. ferruginea* in the earlier stages.

Cocoon. A few threads between leaves.

Pupa. Cylindrical, tapering a little behind, dark mahogany brown; the edges of the segments next to the three moveable incisures sharply cut and nearly black. Cases shagreened, segments punctured sparsely on the anterior two-thirds. Cremaster two low, divergent cones, each with a short, thick, capitate spine at the tip with one or more small hooks on the lower aspect. Length 29mm., width 7mm.

Food plants. Oaks (*Quercus velutina, Q. minor*). The larvæ will feed on the rough leaved oaks, contrary to the habit of *N. angulosa*. The species is double brooded.

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TELEA POLYPEMUS is not a rare moth in the East, but the finding of a large number of their cocoons on apple, prune and willow in the vicinity of Los Angeles certainly is of interest, as I can find no record of their having been taken here before.

Mr. O. W. Howard sent me 50 cocoons taken as above noted, and he succeeded in raising about 75 by enclosing the moth with netting on our common pepper tree, thus establishing a new food plan for *polyphemus*. Early in January three dead cocoons were found well up in the Cahuenga Mountains, northwest of the city, and a number in the brush about the mouth of the San Gabriel Canon, 28 miles away, so the moth is evidently pretty well established.

All the Eastern cocoons that I have seen are wrapped in leaves with no attempt to fasten the stems to the twigs, and readily detach and fall to the ground, but these were closely woven the full length of the stem, and including the twigs adjoining thus being permanently attached to the tree. The moths began to emerge May 30, and continued to come at the rate of three or four a week until the past few warm days, when five appeared on the board this morning.

FRANK S. DAGGETT,
Pasadena, Cal.

NOTE.—Prof. A. J. Snyder took an imago of polyphemus at Salt Lake City, July 4th, 1879.—ED.

ENTOMOLOGICAL NEWS.

[The Conductors of ENTOMOLOGICAL NEWS solicit and will thankfullyreceive items of news likely to interest its readers from any source. The author's name will be given in each case, for the information of cataloguers and bibliographers.]

To Contributors.—All contributions will be considered and passed upon at our earliest convenience, and, as far as may be, will be published according to date of reception. ENTOMOLOGICAL NEWS has reached a circulation, both in numbers and circumference, as to make it necessary to put "copy" into the hands of the printer for each number three weeks before date of issue. This should be remembered in sending special or important matter for a certain issue. Twenty-five "extras," without change in form, will be given free, when they are wanted; and this should be so stated on the MS., along with the number desired. The receipt of all papers will be acknowledged.—ED.

PHILADELPHIA, PA., SEPTEMBER, 1899.

EDITORIAL.

During the past summer the newspapers of the Atlantic coast have been exploiting numerous instances of individuals being attacked or "kissed" by an insect which, in consequence of its asserted habit of swelling the lips of its human victims by its bite or sting, received the fatuous name of "kissing bug." Originating in the neighborhood of Washington, D. C., the report spread from newspaper to newspaper and with the lay people became a veritable midsummer madness. The United States Department of Agriculture identified the insect as *Melanolestes picipes*, a hemipter of previously good character, which fact went a great way in making entomologists in general sceptical as to the whole story, and we are glad to record that the much maligned *Melanolestes* has proven an alibi, as far as the evidence presented at the Academy of Natural Sciences of Philadelphia goes. Out of the many specimens brought to the Academy as the "kissing bug" (many of which had been pronounced the true thing by medical men) *not one* was *Melanolestes picipes*. To be sure the latter has a Latin name which might cast suspicion on any bug, and many of his relatives have a bad reputation, but by sticking to his old time habits of dwelling in secluded spots it has come out of the fray with a spotless reputation. The next time the newspapers wish to make a martyr let them steer shy

of *Melanolestes picipes*, who has proven himself too much for their sensationalism.

The following species have been brought to the Academy of Natural Sciences of Philadelphia as the "kissing bug":

Diptera. *Tabanus sp.; Erax bastardi.*

Hymenoptera. *Camponotus pennsylvanicus* (queen); *Thalassa lunator; Tremex columba sericeus.*

Lepidoptera. *Scepsis fulvicollis.*

Neuroptera. *Perla flavescens; Corydalus cornutus.*

Coleoptera. *Orthosoma brunnea; Phytonomus punctatus; Monohammus titillator; Alaus oculatus; Harpalus caliginosus; H. pennsylvanicus; H. sp.; Tenebrio molitor; Creophilus villosus; Aphidion sp. Balaninus quercus.*

Hemiptera. *Benacus griseus; Prionidus cristatus; Penta toma sp.*

Many of the foregoing were brought in several times by different persons. W. J. F.

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INCREASE OR DECREASE OF DRAGON-FLIES?—[Our quotation in the June NEWS, page 188, from Prof. Kellicott and Mr. Hines' "Odonata, of Ohio," has produced the following:]

"Do you think Prof. Kellicott's remarks about the increase in the number of species for the State of Ohio altogether correct? Such observations are hard to make Butterflies and other insects, as all collectors have observed, 'will have their years' A friend in Beaver county during 25 years observation found *Junonia cœnia* only one season when it was very common. Dr Holland, during 20 years, never saw *Melitœa phaeton* in this country, but a few days ago I took about 15 specimens. Last season on July 4 visited an old gravel pit near Bluffton, and there took 21 spp. of Odonata. On July 5 I visited the same pond at the same time of day; the weather was as nearly like the preceding day as two consecutive mid-summer days can be, and yet I found only about a dozen spp *Tramea lacerata* and *onusta* were numerous on the fourth, but were not seen on the fifth. I have, as a boy, seen the Wabash flowing like a silver ribbon between its blue grass-clothed banks, its waters teeming with fish and its ripples alive with Unionidæ. Last summer I walked along mud flats by as foul smelling pools as could be imagined—for miles I am sure there isn't a live Unio. I saw black bass come to the surface, gasp and float, belly up, down stream. Even old slimy *Necturus* crawled out on the land to die, and their bodies lay along the banks of the river by dozens. Certainly it is an *a priori* argument that the Odonata are perishing when surrounded by such conditions E. B. WILLIAMSON.

DEPARTMENT OF ECONOMIC ENTOMOLOGY

Edited by Prof. JOHN B. SMITH, Sc. D., New Brunswick, N. J.

Papers for this department are solicited. They should be sent to the editor, Prof. John B. Smith, Sc. D., New Brunswick, N. J.

SEVEN NEW LOCALITIES FOR THE MEDITERRANEAN FLOUR MOTH, *Ephestia kuehniella*.—In response to a brief article of mine in *The American Miller* for May, 1899, I have received matted flour containing larvæ and pupæ of the Mediterranean flour moth, *Ephestia kuehniella*, from seven different sources, none of which having been previously reported, so far as I am aware. One lot is from Stark county, Ohio, the first reported from that State, and represents a very serious outbreak. The mill is being torn down. Another package is from Los Angeles county, California. Three lots are from New York State representing Erie, Allegeny and Oswego counties. Two are from Canada, one of which comes from York district along Lake Ontario, while the other is from Leeds district along the St. Lawrence River. Each one of my correspondents reports the same disastrous results formerly reported by myself and others, following the establishment of this insect in a mill. I am also impressed with the fact that this pest is gradually spreading along the water courses of the Great Lakes, and inland along the lines of the railroads. It will certainly be to the advantage of all millers to be on their guard, and take immediate steps for the suppression of the pest should it appear on their premises. I am now making some experimental tests with hydrocyanic acid gas for the destruction of this and other insects in mills and closed buildings. Results thus far are very satisfactory, and I believe the gas will come into extensive use for such purposes very soon.

W. G. JOHNSON,
College Park, Md.

THE NEW PEACH MITE.—With regard to the several references to "The New Peach Mite," which have appeared in ENTOMOLOGICAL NEWS since last December, it may be interesting to some of your readers to learn that in all probability the same or a very similar pest occurs in Western Australia.

During my stay in that colony (1896-7) I had several opportunities of observing a peculiar silvering of the upper surfaces of the leaves of some deciduous fruit trees This was due to the attack of a very smale *Phytoptus*. The injury appeared to me more pronounced during autumn, coming into evidence after most of the peach crop had been marketed. It did not seem to be of a very serious nature and was taken into little account by orchardists; and though no doubt a great deal of the functions of the affected leaves

was lost, still there was no particular evidence in the growth of the trees which I have in mind to show that such was the case, and unless my memory deceives me the leaves did not fall before their time. It often happened, particularly with nectarines, that every leaf upon the tree would be affected.

Judging from Johnson's note alone, I should never have connected his pest with the Western Australian mite, as similarly affected nursery stock never came under my notice; but that the effect and nature of the mites' attack upon young plants in the nursery and vigorous growing trees might differ considerably I have little doubt. It is from Rolf's remark, however, to the effect that the mite causes "what might be termed a silvering of the leaves" that the possibility of the Western Australian pest being the same, occurred to me. This mite was also well known to my then colleagues R. Helms and A. M. Lea, and the latter has a short note upon it in the *Journal of the W. A. Bureau of Agriculture*, (p. 1194, April 17, 1897,) in which he describes the affected leaves as having a "glassy or silvery appearance on their upper surfaces," and correctly refers to this as due to the destruction of the surface cells by the mite, and their subsequent drying out and bleaching. I have only seen the peach, nectarine, almond and apricot so affected, but Lea adds the plum, quince and apple.

As far as I am aware this peach mite only occurs in the Swan River district, Western Australia, as I have not seen it in New South Wales nor the neighborhood of Melbourne or Adelaide, nor has it been reported so far by others from the remaining colonies of Australasia.

CLAUDE FULLER, F. E. S.

Department of Agriculture,
Capetown, April 24, 1899.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

THE Entomological Society of Albany has recently been organized with an initial membership of about twenty under the following officers: Dr. E. P. Felt, President; Prof. Charles S. Gager, Vice President; Mr. Charles S. Banks, Recording Secretary; Miss Margaret F. Boynton, Corresponding Secretary; Prof. H. M. Pollock, Treas. The headquarters of the Society will be, for the present, at the office of Dr. E. P. Felt, the State Entomologist, where the regular meeting will be held the second Friday of each month. The objects of the organization are the promotion of interest in entomological science and the furtherance of fellowship among those interested, for their mutual benefit and enjoyment.

HARVARD UNIVERSITY has this year conferred the degree of Doctor of Science upon Justus W. Folsom, of Cambridge, Mass., for a thesis entitled, "Studies Upon the Mouthparts of Apterygota."

You will no doubt have heard of the purchase by the Brooklyn Institute of Arts and Sciences of the Neuomegen collection of lepidoptra, and the donation of my own collection. I have parted with everything relating to entomology, books, and all. I still retain my interest in the study, and have been appointed to the honorary position of curator of entomology to the Institute.

The Brooklyn Institute has now the best and largest collection of North American Lepidoptera in the *world*.

*Referred to Prof A. J. Snyder to add to his list of largest American collection

EDW. L. GRAEF.

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Entomological Literature.

COMPILED BY P. P. CALVERT.

Under the above head it is intended to mention papers received at the Academy of Natural Sciences of Philadelphia pertaining to the Entomology of the Americas (North and South). Articles irrelevant to American entomology will not be noted. Contributions to the anatomy, physiology and embryology of insects, however, whether relating to American or exotic species, will be recorded. The numbers in HEAVY-FACED TYPE refer to the journals, as numbered in the following list, in which the papers are published; * denotes that the paper in question contains descriptions of new North American forms. Titles of all articles in foreign languages are translated into English; usually such articles are written in the same language as the title of the journal containing them, but when such articles are in other languages than English, French, German or Italian, this fact is indicated in brackets.

1. Proceedings of the Academy of Natural Sciences of Philadelphia, 1899.—**2.** Transactions of the American Entomological Society, Philadelphia, '99.—**4.** The Canadian Entomologist, London, Ont., '99.—**5.** Psyche, Cambridge, Mass., '99.—**6.** Journal of the New York Entomological Society, June, '99.—**8.** The Entomologist's Monthly Magazine, London, '99—**9.** The Entomologist, London, '99.—**10.** Nature, London, '99.—**11.** The Annals and Magazine of Natural History, London, '99.—**12.** Comptes Rendus, l'Academie des Sciences, Paris, '99.—**21.** The Entomologist's Record, London, '99.—**22.** Zoologischer Anzeiger, Leipsic, '99.—**24.** Berliner Entomologische Zeitschrift, xliii, 3, 4, May, '99.—**25.** Bolletino dei Musei di Zoologia ed Anatomia Comparata d. R. Universita di Torino, '99.—**30** Memoires de la Société Zoologique de France, xi, '98.—**30 b.** Bulletin of the same, xxiii, '98.—**32** Bulletin du Muséum d'Histoire Naturelle, Paris.—**35.** Annales, Société Entomologique de Belgique, xliii, Brussels, '99—**36.** Transactions, Entomological Society of London, '99, pt. ii, June 22.—**37.** Le Naturaliste Canadien, Chicoutimi, Quebec, '99.—**40.** Societas Entomologica, Zurich-Hottingen, '99.—**41.** Entomologische Nachrichten, Berlin, xxv, '99—**44** Verhandlungen, Zoologisch-botanischen Gesellschaft in Wien, xlix, '99.—**49.** Termeszetrajzi Füzetek, xxii, 2, Budapest, May 6, '99.—**52.** Transactions, South African Philosophical Society, x, 3, Cape

Town, '99.—**55.** Le Naturaliste, Paris, '99.—**56.** Mittheilungen schweizerischen entomologischen Gesellschaft, x, 5, Schaffhausen, April, '99.—**58.** Revista Chilena de Historia Natural, iii, 3, 4, Valparaiso, March, April, '99.—**68.** Science, New York, '99.—**79.** La Nature, Paris, '99.—**81.** Biologisches Centralblatt, Erlangen, May 15, '99.—**82.**—Centralblatt für Bakteriologie, Jena, '99.—**84** Insekten Börse, Leipsic, '99.—**87.** Revue Scientifique, Paris, '99.—**102.** Proceedings, Entomological Society of Washington, iv, 3, May 24, '99.—**111.** Seventh Annual Report, Ohio State Academy of Science, Columbus, '99.—**112.** Bulletins, New York State Museum, vi, Albany, '99.—**113.** Archives Italiennes de Biologie, xxxi, Turin, '99.—**114.** Rivista di Patologia Vegetale, Florence, '98.—**115.** Oversigt Kongelige Danske Videnskabernes Selskabs Forhandlinger, '98, 6, Copenhagen.

The General Subject.—Anon. Insects from the higher latitudes of North America **21**, June 1.—Ashmead, W. H., Linell, M. L., Schwarz, E. A., Dyar, H. G., Coquillett, D. W., Banks, N., Cook, O, F. Reports upon the Insects, Spiders, Mites and Myriapods collected by Dr. L. Stejneger and Mr. G. E. H Barrett-Hamilton on the Commander Islands, in: The Fur Seals and Fur-seal Islands of the Northern Pacific Ocean by David Starr Jordan. Part 4. Washington: Government Printing Office, 1893. Rec'd June 13, '99.—Aurivillius, C. On the Linnean types of insects at Upsala, **84**, June 15.—Berlese, A. Phenomena which accompany fecundation in some insects, figs., **114**, vi, vii.—Cuénot, L. The means of defense of animals, **30 b.** Felt, E. P. Collection, preservation and distribution of New York insects, figs., **112**, 26, April.—Folsom, J. W. The segmentation of the insect head, **5**, Aug.—Fritsch, A. Fauna der Gaskohle und der Kalksteine der Permformation Böhmens, Bd. iv, heft 1 Insecta, Myriopoda. Pars I. Prag, 1899, 12 pls., figs.—Harrington, W. H. Entomological recollections, **37**, May.—Howard, L. O. The Thomson-Mayr priority question settled, **102**.—Huard, V. A. The study of entomology, **37**, June.—Jänichen, R. Acetic ether a good insect-killing medium. **84**, July 13.—Kienitz-Gerloff. F. Plateau's new researches on the relations between insects and flowers: study on the role of some organs called vexillary. **81**.—Künckel d'Herculais, J. On ecdysis in insects considered as a means of defence against animal or vegetable parasites—special roles of the tracheal and intestinal ecdyses [transl from C. R. Acad Sci. Paris], **11**, July.—Meldola, R. Mimicry and warning colors, **10**. May 18.—Oudemans, J. T. De Nederlandsche Insecten. Aflevering 11. s'Gravenhage Martinus Nijhoff, '99.—Plateau, F. New researches on the relations between insects and plants, **30**.—Porter, C. E. Catologo metodico provisional de las colecciones Zoolojicas, I Artropodos i Vermes Chilenos, Museo de Historia Natural de Valparaiso, 1899. [213 Insects, 5 Arachnids, 2 Myriopods]. Data for a knowledge of the insects of the department of

Quillota [Chile—in Spanish], **58.**—Ris, F. Obituary of Prof. Gustav Schoch, **56.** Roy, E. Vitality of insects, **37.** June.—Sherborn, C. D. An index to the generic and trivial names of animals, described by Linnæus, in the 10th and 12th editions of his "Systema Naturæ," publication 25, Museum Handbooks, the Manchester Museum, Owens College, '99.—Speiser, P. On reduction of the wings in ectoparasitic insects, **84,** May 18, 25.—Trotter, A. Did Redi indeed believe that galls and their makers were generated by a "anima vegetativa" of plants? Bulletino, Societa Veneto-Trentina di Scienze Naturali, vi, 4, Padua. '99.—Tutt, J. W. The scientific aspects of entomology, [and] Presidential address [on study of natural history as a science]. Proceedings, South London Entomological and Natural History Society, '98, pt. ii, '99.—Wasmann, E. G. D. Haviland s observations on the termitophily of *Rhopalomelus angusticollis* Boh., **44,** 4, May 9.—Wheeler, W. M. Anemotropism and other tropisms in insects, Archiv für Entwicklungsmechanik, viii, 3, Leipsic, June 27, '99.

Economic Entomology.—Anon. Abstracts of recent literature, Experiment Station Record, x, 9, U. S. Dep't of Agriculture, Washington, '99.—Anon. American literature on the San José scale, **24.**—Anon. The San José scale, **87,** May 27.—Austen, W. Bookworms in fact and fancy, Appleton's Popular Science Monthly, New York, June, '99.—Berlese, A., and Leonardi, G. American Coccidæ which threaten European fruit-culture, figs., **114,** vi, vii.—Cockerell, T. D. A. Notes on Australian Coccidæ, Victorian Naturalist, Melbourne May, '99.—Crump, W. The pear midge, Gardener's Chronicle, London, May 27, '99.—Felt, E. P. Shade tree pests in New York State, figs., 5 pls., **112,** 27, May.—Finlay, C. J. Mosquitoes considered as transmitters of yellow fever and malaria, **5,** July.—Fuller, C. A new poultry pest (*Simulium*, sp.), figs., Agricultural Journal, Cape Town, Jan. 5, '99.—Grassi, B. Relations between malaria and certain special insects, **113**; Malaria propagated by the means of certain special insects, **113.**—Hericourt, J. Contagion through the medium of insects [in Spanish, translated from Revue des Revues Paris, April 1, '99], Anales Sociedad Cientifica Argentina, Buenos Aires, May, '99. Hopkins, A. D. Report on investigations to determine the cause of unhealthy conditions of the spruce and pine from 1880-1893, figs., Bulletin 56, West Virginia Agr. Exper. Station, Morgantown, W. Va., April, '99.—Howard, L. O. The principal insects affecting the tobacco plant, figs., Yearbook, U. S. Dep't of Agriculture, Washington, 1898; Pests of the hop crop, figs., advance sheets (pp 113-158) of a work on the Hop Industry, Orange Judd Co.—Hunter, S. J. The commotion in Kansas and Missouri upon the appearance of *Dissosteira* in Colorado, **5,** July.—Jonnson, W. G. The Mediterranean flour moth again, **4,** June; Isaac P. Trimble, economic entomologist, **102,**—

Kirby, W. F. The gipsy moth and its introduction into America, figs., **10**, May 25.—Larbaletrier, A. The fly of the olive, **79**, May 27.—Marlatt, C. L. A dangerous European scale insect [*Aspidiotus ostreæformis* Curtis], not hitherto reported, but already well established in this country, **68**, July 7; An investigation of applied entomology in the Old World, **102** —Mühlung, P The carrying of disease by bugs and leeches, **82**, May 29.—Nutall, G. H. F. Later researches on the role of mosquitoes in the distribution of malaria, **82**, June 19.—Rainbow W. J. The Queensland cattle tick, Records of the Australian Museum, iii, 5, Sydney, April 17, '99 Schenkling-Prévot. The apple-tree spinner (*Hyponomeuta malinella* Zell), **84**, May 11. —Scott, W. M. Legislation against crop pests Dangerous pests prescribed by the Board, with remedial suggestions, figs. Bulletin No 1 Georgia State Board of Entomology, Atlanta, April, '99 —Sirrine, F. A Combating the striped beetle on cucumbers, figs., Bulletin 153 New York Agric. Exper. Station, Geneva, N. Y., May, '99.—Webster, F M. Fatal temperature for *Diaspis amygdali* Tryon, **4**, June; The tobacco flea-beetle (*Epitrix parvula*) attacking tobacco in barn, **4**, July - Zimmermann, H. On the life-history of, and on combating the apple-spinner, **84**, June 8.

Arachnida.—Banks, N A new species of the genus *Halarachne*, figs.,* **102**; An American species of the genus *Cæculus*.* fig., **102**; Some spiders from northern Louisiana.* **102**; *Tarsonemus* in America, figs ,**102**; A new Solpugid from California,* **102**; Arachnida,* See the General Subject, figs —Berlese, A. On the mesintestine of some Arachnida, **114**, vii —Borelli, A. Travels of Dr. A Borelli to the Argentine Republic and Paraguay. xxiii. Scorpions, **25**, 336; Scorpions collected at Darien by Dr. E. Festa, **25**, 338; Travels of Dr. E. Festa to Ecuador and the neighboring regions. xviii. Scorpions. **25**, 345 - Calandruccio, S. The ectoparasitic Ixodidæ of man, Bulletino, Accademia Gioenia di Scienze Naturali in Catania, April, '99.—Canestrini, G. and Kramer, P. Demodicidæ and Sarcoptidæ. Das Thierreich, 7 Lieferung, Berlin, April, '99. pp. xvi, 193 31 text-figs.—Cook, O. F *Hubbardia*, a new genus of Pedipalpi,* 1 pl., **102**.—Goeldi, E. A. Arachnological studies relating to Brazil [in Portugese], Boletim do Museu Paraense de Historia Natural e Ethnographia, ii, 4. Para, Dec., '98; *Epeiroides bahiensis* Keyserling, a twilight spider of Brazil, fig., 1 pl., Zoologische Jahrbücher (Abtheil. f. System.), xii., 2, Jena, April 25, '99 - Kraepelin, K. Scorpiones and Pedipalpi. Das Tierreich. 8 Lieferung, Berlin R. Friedländer u. Sohn. March, 1899 Pp xviii, 265 94 text-figs; —Meinert, F. On the Pycnogonida collected by the "Ingolf' expedition [in Danish], **115**.—Pokrowsky, S. Observations on oviposition of Phelcus, [and] Still a pair of head-tubercles in spider embryos, figs. **22**, June 26.—Sabbatani, L. Anti-coagu-

lating ferment of Ixodes ricinus. **113**.—Schenkling-Prévot Obtainance of food and nest-building of *Theridium riparium* (Blacw.) Thor., **84**, June 1. Supino, F. Observations on the anatomy of the pseudoscorpions, figs., Rendiconti, Reale Accademia di Lincei, Rome, June 18, '99.—Wolcott, R. H. On the North American species of the genus *Atax* (Fabr.) Bruz., 5 pls. Transactions, American Microscopical Society, xx, Lincoln, Nebraska, Hunter Printing Co., May, '99.

Peripatus and Myriopods.—Boas, J. E. V. On the place of *Peripatus* in the animal kingdom [in Danish], **115**.—Cook, O. F. The Geophiloidea of the Florida Keys, 2 pls.,* **102**; Myriapoda. See the General Subject.—Duboscq, O. Researches on the Chilopods, 7 pls., Archive de Zoologie Experimentale et Generale, (3) vi, 4, Paris, '98. Rec'd. June 9, '99.—Kenyon, F. C. A new Mexican Diplopod *Decaporodesmus motzoranginis*, type of a new family Decaporodesmidæ, **102**.—Peach, B. N. On some new Myriapods from the Palæozoic rocks of Scotland, 1 pl., Proceedings, Royal Physical Society, Edinburgh, Session '97-'98, Feb., '99.—Porter, C. E. Introduction to the study of the Myriapods of Chile (cont.), [in Spanish], **58**.—Purcell, W. F. On the South African species of Peripatidæ in the collection of the South African Museum, Annals, South African Museum, i, 2, (London), March, '99.

Apterygota.—Cook, O. F. New Dicellura, 2 pls.,* **102**.

Orthoptera.—Bolivar, I. Revision of the Pyrgomorphinæ of the section Ommexechæ [in Spanish], **58**.—Bordage, E. Regeneration of the limbs in the Mantidæ and constancy of the tetramery of the tarsus of regenerated limbs after autotomy in the pentamerous Orthoptera, **12**, June 26; On the absence of regeneration of the hind limbs of the jumping Orthoptera and its probable causes, **12**, July 10.—Burr, M. Abbreviation of wings in Orthoptera, **21**, June 1; Exotic Conocephalidæ in England, **21**, May 15; Parasites of Orthoptera, **21**, July 1.—Comstock, J. H., and Needham, J. G. The wings of insects, chapter iv (concl.), figs. [Orthoptera], American Naturalist, Boston, July, '99.—Coupin, H. Natural history of the praying mantis, **87**, July 1.—Leger, L., and Duboscq, O. On the Malpighian tubes of the cricket: Observations on the preceding note by A. Giard, Comptes Rendus, Société de Biologie, Paris, June 24, '99.—McNeill, J. Arkansas Melanopli, iii,* **5**, June.—Scudder, S. H. The North American species of *Orphulella*,* **4** July; An index to Stal's genera of Orthoptera, supplement to, **5**, Aug.—Tutt, J. W. Migration and dispersal of insects; Orthoptera, **21**, May 15.

Neuroptera.—Banks, N. Descriptions of New North American Neuropteroid insects,* **2**, xxv, 3, Jan.; Neuroptera, See the General Subject.—Calvert, P. P. Odonata from Tepic, Mexico, with supplementary notes on those from Baja California, figs., 1 pl.* Proceedings, California Academy of Sciences (3) i, 12, San Francisco

May 22, '99; Parallelisms in structure between certain genera of Odonata from the Old and the New Worlds, I.—Hine, J. S. Additions to the list of Ohio dragon-flies, III.—Kirby, W. F. On a collection of Odonata (Dragon-flies) from Panama,* 1 pl., II. May.—McLachlan, R. Notes on certain Palæarctic species of the genus *Hemerobius*, Nos. 2, 3, figs., 8, June, July.—Tutt, J. W. Migration and dispersal of insects: dragon-flies, 21, June 11 July 1.

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DOINGS OF SOCIETIES.

A meeting of the American Entomological Society was held June 22, Vice President Johnson in the chair. Thirteen persons were present. A large collection of coleoptera was presented by Mr S. N Dunning, of Hartford, Conn. Mr H W. Wenzel presented 200 specimens of Orthoptera. The thanks of the Society were tendered these two gentlemen for their generous donations. Mr. Liebeck spoke of the long life of a barkbeetle, *Rhagodera tuberculata*, which had been sent, gummed on a card, from Los Angeles, Cal., to South Dakota and thence to Philadelphia, and was received in the latter city alive. Mr Johnson exhibited a small saw-fly, *Claudia pectinicornis*, which had been determined by Mr. Ashmead. He had bred them in rearing the larvæ of the rose leaf roller, tortricid. It is probably an introduced species. Mr. Reif stated that he had found about 500 larvæ of *Apatura celtis* on *Celtis occidentalis* at Bethlehem, Pa. The larvæ is pale green with an antlered head and a forked tail. It is rare in the State. Dr. Skinner reported the capture by Mr. Wilmer Stone, of *Melitaea Harrisii* at Lopez, Sullivan county, Pa. The proposed directory of American Entomologists to be published by the Society was mentioned by the same speaker and ways and means of getting information for it were discussed. The chairman announced the death of our fellow member, Dr. Horace G. Griffith, and said his interest in natural science was well known to the members, and that his loss would be keenly felt.

HENRY SKINNER,
Sec.

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At the May meeting of the Feldman Collecting Social held at the residence of Mr. H. W. Wenzel, 1523 South Thirteenth street, Philadelphia, twelve persons were present.

Mr Seiss read an article from a recent number of *Gleanings in Bee Culture*, in which it was asserted that dragon-flies are not injurious to bees in northern climates. The writer accounted for the devouring of bees by dragon-flies in the South by saying that the males migrated in the fall, at which time they apparently changed their diet from mosquitoes and other insects to bees. The speaker regarded this theory as ridiculous.

Mr. Johnson stated that *Aeschna ingens* is extremely destructive to bees in Florida.

Mr. Boerner exhibited specimens of *Trichopteryx Haldemani* from near Gloucester, N. J.

Dr. Castle exhibited some recent captures of Coleoptera including *Dichelonycha fuscula*. Out of 49 specimens taken on May 3d. only one female was present; on May 6,50 per cent were females, and on May 12 and 15 over 90 per cent. were of that sex.

Dr. Skinner pointed out that discrepancy between the sexes as

to numbers is not as great as has often been supposed by writers Knowledge of the life history of the species will no doubt show that the sexes are nearly equally proportioned as to numbers.

Mr. Seiss stated that out of 30 specimens of *Cryptus nuncius* reared there were 28 females and in another series of 30 reared two days later, only four were females.

Dr. Skinner remarked that on April 30th, near Westville, N. H. he observed a dragon-fly chasing a specimen of *Anthocharis genutia*. The dragon-fly kept along a road running through the woods where insects were easily seen, which act was probably an indication of intelligence on the part of the dragon-fly. A specimen of butterfly which had been dropped by the odonat had the wings and thorax intact but the soft body parts had been devoured.

Mr. Johnson exhibited *Psychoda Slossoni*, *superba*, *alternata* and *marginalis*. The latter was described from New York State and he had recently found abundantly near Riverton, N. J. Also specimens of *Stictocephala vau* which he had found commonly in the larval state under bark, near Overbrook, Pa. He also recorded the capture by C. Greene, near Darby, Pa., on May 7, of *Brachyopa vacua*. It had not before been recorded from so far south

Mr. Johnson recorded the occurrence of *Anthocharis genutia*, April 23 and April 30 at Riverton, N. J. On former date two males were taken and on April 30 four females, three males

Dr. Skinner reported the capture of the same species at Clementon, May 7 and at Westville on April 16, 23 and 30.

Mr. H. Wenzel stated that in the old list of insects of New Jersey there were thirteen species of *Pselaphidæ* mentioned. In the forthcoming list the number will be increased to 32 species as far as his own collection is concerned These were all taken between January 28 and April 14. The late fall and winter months seem to be the best time for collecting these insects by means of sieving. He had taken several specimens of *Pselaphus fustifer* and six specimens of *Bithenus tychoides*, both of which had been described from unique specimens. *Pselaphus fustifer* had been referred by Brendel as a synonym of *P. longiclavus* with which conclusion the speaker did not concur. He also recorded the capture of a specimen of *Cychrus elevatus* at Anglesea, N. J., on May 7.

Dr. Skinner stated that the seashore representatives of many species show marked differences from those found further inland.

WILLIAM J. FOX, Secretary.

EXCHANGES

NOT EXCEEDING THREE LINES FREE TO SUBSCRIBERS.

☞ These notices are continued as long as our limited space will allow; the new ones are added at the end of the column, and only when necessary those at the top (being longest in) are discontinued.

Identification of Insects [Imagos] for Subscribers.

Specimens will be named under the following conditions: 1st, The number of species to be LIMITED TO TWENTY-FIVE for each sending; 2d, The sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly. Exotic species named only by special arrangement with the Editor, who should be consulted before specimens are sent. Send a two-cent stamp with all insects for return of names. PLEASE PUT DATE OF CAPTURE AND EXACT LOCALITY ON EACH SPECIMEN. Before sending insects for identification, read page 41, Vol. III. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

BOOKS.—One complete set and first four volumes "Insect Life," bound and complete set Forbes's Illinois Reports, including miscellaneous essays, for exchange. Wanted, Riley's Missouri Reports, Fitch's New York Reports and other entomological literature. –W. G. Johnson, College Park, Md.

I WILL COLLECT AND EXCHANGE California insects for live tarantulas or trap-door spiders.—C. E. Hutchinson, 2631 Michigan Ave., Los Angeles, Cal.

LEPIDOPTERA.—Wanted to purchase or exchange, all species of *Saturnia* and *Bombyx*, with their cocoons.—D. Levrat, 7 Rue St., Polycarpe, Lyons, France.

WANT BY EXCHANGE or will pay cash for Volumes 1, 2, 3 and 4, Buffalo Society of Natural Sciences. Also Proceedings American Philosophical Society of Philadelphia for 1873.—John Akhurst, 78 Ashland Place, Brooklyn, New York.

WANTED.—Scydmænidæ and Pselaphidæ, named or unnamed. Will give good exchange in Coleoptera or will collect other orders.—R. J. Crew, 225 Wilton Ave., Toronto, Canada.

LEPIDOPTERA.—Will purchase or exchange native and foreign Lepidoptera.—H. K. Burrison, West Newton, Mass.

ODONATA.—I have fine specimens of *Gomphus graslinelus*, ♂ ♀, which I wish to exchange for Odonata or Lepidoptera.—James Tough, 164 Ogden Ave., Chicago, Ill.

LEPIDOPTERA and Coleoptera from Germany for exchange for anything not in my collection.—Send list to William Kayser, Wapakoneta, O.

COLEOPTERA.—Carabidæ and Cicindellidæ of North America wanted in exchange for Carabidæ from Western Pennsylvania.—John Bright, 127 Roup St., Pittsburg, Pa.

LIVE PUPÆ AND COCOONS, FERTILE EGGS, wanted in exchange for European and exotic butterflies, Coleoptera, Hymenoptera, Hemiptera.—A. Voelschow, Schwerin, Meckbg, Germany.

WANTED.—HOMOPTERA from the South and West. Will give New Hampshire Lepidoptera in exchange.—Charles F. Goodhue, Webster, Mer. County, N. H.

WANTED.—To exchange Coleoptera of Northern Texas for those of other portions of the United States. I will collect during this season, for exchange, specimens in all orders represented here.—E. C. Lewis, Forney, Texas.

COLEOPTERA.—I will give 400 species and 1,200 specimens of European Coleoptera in exchange for 50 specimensof *Cychrus*, any species except *Lecontei*.—E. C. Ehrmann, 2314 Sarah Street, Pittsburg, Pa.

COLEOPTERA.—Desire to exchange with collectors of North American Coleoptera. Have good series authentically determined.—H.G. Griffith, M. D., Manayunk, Philadelphia.

HYMENOPTERA.—Wanted, specimens of the common Saw-fly, *Cimbex americana* from any locality. Will give hints as to easy capture, etc., to anyone interested. Named insects of any order given in exchange.- Charles Brues, 320 Hampden Court, Chicago, Ill.

A FAIR PRICE will be given for specimens of *Thecla læta* and *Thecla M. album*. Apply to Entomological News.

WANTED.—Micro lepidoptera of the United States, especially *Tineina*. Living larvæ, especially leaf miners and case bearers desired. Will pay cash or give Coleoptera or Lepidoptera in exchange.- W. G. Dietz, M. D., 21 N. Vine St., Hazelton, Pa.

LEPIDOPTERA.—Diurnals, which are as yet not represented, desired from all countries. California and Mexican species given in exchange. Send lists.—E. K. Harvey, 1806 West Eleventh St., Los Angeles, Cal.

I AM willing to collect any order that is required this season to be found in Colorado. Correspondence solicited.—Ernest J. Oslar, 1853 Marion St., Denver, Colorado.

WANTED.—No. 3, of Vol. 6, Insect Life. Exchange or purchase.—J. G. Jack, Jamaica Plain, Mass.

WANTED, in large numbers.—*Luna, Io, promethia, cynthia, polyphemus, imperialis, regalis, ajax, cresphontes* and other chrysalids. Offer *columbia, ceanothi, gloveri, Pap. brevicauda* and *Sphinx modesta*.—Carl Braun, Bangor, Maine.

LEPIDOPTERA.—Exchange and correspondence desired; beginners invited. Especially wish *Lycaenidæ* and *Geometridæ* from all parts of North America, desiring varieties and intergrades; returns in exchange or cash.—John L. Healy, 4139 Bosworth Ave., Chicago, Ill.

LEPIDOPTERA.—I have New England species, also diurnals from South America, to exchange for Lepidoptera from all parts of the United States and Canada.—Send list to H. H. Newcomb, 178 Tremont St., Boston, Mass.

COLEOPTERA.—I offer unnamed Coleoptera of this locality for named or unnamed species of Coleoptera, Diptera and Hymenoptera of the United States. Correspondence solicited.—G. Chagnon, Box 186, Montreal, Canada.

BOOKS.—I will exchange Vols. 1 to 5 of Entomological News for Comstock's Manual or Holland's Butterfly Book. Will also exchange Vol. 1 Entomologica Americana and Vols. 8 to 29, Can. Entomologist, for standard works on birds.—H. W. Nash, Pueblo, Colorado.

LEPIDOPTERA.—I will take in exchange for exotic and native butterflies live pupæ and cocoons of *ajax*, zolicaon, *cresphontes, astylus*, modesta, *opthalmicus, vancouverensis, kalmiæ, chersis, regalis, ceanothi*, columbia, gloveri and others.—Charles F. Tenim, 48 Ralph St, Brooklyn, New York.

LEPIDOPTERA.—Specimens of *Thecla strigosa* wanted,—Dr. Henry Skinner, 1900 Race St., Philadelphia.

LEPIDOPTERA.—Wanted in papers, American species of *Catocola, Arctidæ, Sphingidæ* and *Rhopolocera* in exchange for European Lepidoptera. Will collect Coleoptera.—E. M. Dadd, 3 Colina Villas, Green Lanes, Wood Green, London, England, Great Britain.

WANTED.—I am desirous of obtaining a copy of Cramer's Papillons Exotiques des. 3 part, du monde l'Asie l'Afrique, l'Amerique, 4 vol. Any bookseller or other person having a copy to sell can communicate their lowest price to Herman Strecker. Box 311, Reading, Pa., U. S. N. A

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